

ABSTRACT

A transition for transmitting a mm-wave signal from one plane to another, the transition comprising: (a) first and second transmission lines on parallel planes; (b) a third transmission line orthogonal to the first and second transmission lines, wherein either the first and second transmission lines are suitable for transmitting a TEM mode signal and the third transmission line is suitable for transmitting a waveguide mode signal, or the third transmission line is suitable for transmitting a TEM mode signal and the first and second transmission lines are suitable for transmitting a waveguide mode signal; and (c) first and second transducers, the first transducer coupled between the first and third transmission lines, the second transducer coupled between the second and third transmission lines, each of the transducers suitable for converting a TEM mode signal to a waveguide mode signal.